

Appl. No.: 10/803,298
Amdt. dated 10/21/2005
Reply to Office action of July 21, 2005

REMARKS

Reconsideration of the above identified application is respectfully requested in light of the above amendments and the following remarks.

The Drawing Objections

Filed herewith are replacement sheets for sheets 1/10, 2/10, and 7/10 of the drawings. Sheets 1/10 and 2/10 now contain the legend "prior art" as suggested by the Examiner. Also sheet 7/10 has been amended to schematically illustrate the signal source and the measuring coil in Fig. 7 of the drawings. The added features are clearly supported by the original disclosure, note for example the Abstract.

Abstract Objections

The Abstract has been amended to delete the word "comprising". Reconsideration is requested of the objection to the word "means" as it appears in the Abstract, since it clearly is not used in the Section 112 ¶6 sense.

Claim Objections

In response to the Examiner's objection to the phrase "and/or" in the claims, the phrase has been deleted or revised in all of the claims.

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The §103 Rejections

Claims 1-3 and 23 were rejected under §103 of the patent status as being obvious from the applicant's admitted prior art in view of Schneider Patent No. 8,073,043.

The admitted prior art as illustrated in Figs. 1 and 2 of the present invention relates to a circuit which is used to measure distances in a non contacting manner and which utilizes a measuring coil 3. However, and as acknowledged by the Examiner, the admitted prior art circuit does not disclose or suggest the use of a switched capacitor (SC) network as presently claimed.

The Schneider patent discloses a method and an apparatus for determining the position and orientation of a remote object. The remote object is coupled to a sensor which detects the electromagnetic fields which are generated by a plurality of field generating elements. The output of the sensor is amplified and coupled to a signal processing unit, which should reduce out of band signals. In the preferred embodiment it is a simple low pass filter comprised of a resistor and a capacitor. Other forms of signal processing units might include none, passive, active analog and switched capacitor, note column 23, lines 57-60. Thus Schneider just mentions the usage of a switched capacitor network for processing a sensor signal. Schneider doesn't disclose, why this switched capacitor network should be used or how it might be configured or implemented.

In addition, there is no teaching in the Schneider patent of the particular SC network as now claimed, and which comprises at least three SC units, with two of the SC units configured to process the respective input signals and the third SC unit configured to combine the outputs of the first two SC units.

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New dependent Claims 24-27 define even more specifically the nature of the processing performed by the third SC unit and thus further distinguish the present invention from the prior art. Specifically, Claim 24 recites that the first two SC units process the signals differently, and Claim 26 recites that the third SC circuit comprises a SC adder (note unit 11 in Fig. 7) or a SC difference amplifier (note unit 14 in Fig. 9).

Thus even when the admitted prior art and Schneider are considered collectively, the specific SC network as now set forth in the two base claims is neither disclosed or suggested. In this regard, it should be noted that this was the conclusion of the European Examiner as set forth in the IPER, a copy of which was filed in the present application on August 8, 2005, when equivalent prior art was considered.

In the Official Action, Claims 4-22 were rejected upon a proposed combination of the admitted prior art and Schneider as discussed above, plus Ribner patent No. 5,148,166.

Ribner discloses a third order sigma delta oversampled analog-to-digital converter network, which is implemented, using switched capacitor networks. The different switched capacitor networks are used to integrate, differentiate, add or subtract the inputs. Ribner just discloses possible implementations of integrators, differentiators, adders, and subtractors using switched capacitor networks. Ribner doesn't disclose how the circuit shown in Fig. 1 of the present patent application might be implemented using a switched capacitor network was claimed.

For the reasons set forth above, it is respectfully submitted that base Claims 1 and 23 are in condition for immediate allowance, along with the claims that depend from Claim 1.

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Respectfully submitted,

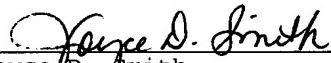


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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on October 21, 2005


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Amendments to the Drawings:

Replacement sheets 1/10, 2/10, 7/10 are presented in the Appendix.